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Snow Surveys and Water Supply Forecasts
Montana and Northern Wyoming
Upper Missouri,
Upper Columbia and
Yellowstone Rivers

SOIL CONSERVATION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE
AND
MONTANA AGRICULTURAL EXPERIMENT STATION

in cooperation with the U. S. Forest Service, U. S. Geological Survey,
National Park Service, U. S. Bureau of Reclamation, State Engineers
and Wyoming and other Federal, State and local Organizations.

— AS OF —
FEBRUARY 1, 1955

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNOW SURVEY
AND WATER SUPPLY FORECAST REPORTS:

Forecasts by U. S. Weather Bureau of total annual streamflow October-September, inclusive, at more than 300 gaging stations are issued monthly January through May in the publication WATER SUPPLY FORECASTS FOR THE WESTERN UNITED STATES.

Weather Bureau forecasts of runoff presented in that bulletin are computed from procedures based on mathematical analysis of the relation between precipitation and runoff.

The Weather Bureau bulletins may be secured by writing to:

Hydrologist in Charge
River Forecast Center
U. S. Weather Bureau
712 Federal Office Building
Kansas City 6, Missouri

For current information on local river and flood conditions, reference should be made to the appropriate River District Office, listed below:

Meteorologist in Charge.....Missouri River and
Weather Bureau Office tributaries above
Box 1705 Fort Peck Dam; Milk
Helena, Mont. River

Meteorologist in Charge.....Yellowstone River
Weather Bureau Airport Station and tributaries.
Box 1338
Billings, Mont.

Meteorologist in Charge.....Columbia River and
Weather Bureau Airport Station tributaries above
R.F.D. #1 and including Grand
Spokane, Washington Coulee Dam.

State of Montana

235864

FEDERAL - STATE COOPERATIVE
SNOW SURVEYS and WATER SUPPLY FORECASTS
for
MONTANA AND NORTHERN WYOMING
(Upper Missouri and Upper Columbia River Basins)

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WATER SUPPLY OUTLOOK
FOR 1955 SEASON
FEBRUARY 1, 1955

Below normal stream-flow is expected during the 1955 snow-melt season. Both the Missouri and the Columbia River Basins have a very light snow-pack, as shown by February first snow surveys. The present snow-pack over the Upper Missouri Basin as a whole, is 54 per cent of last year and 62 per cent average. The present snow-pack over the Columbia Basin as a whole, is 42 per cent of last year and 57 per cent average. Valley precipitation data also confirms the shortage of available water this season. Carry-over storage in Irrigation Reservoirs in the Flathead, Sun, Marias, and Milk River Basins is above average level. Some Reservoirs on the Beaverhead, Jefferson, and Musselshell River Basins have very little stored water in reservoirs. Surface water flows in the principal streams have been close to median for the month of January. The Musselshell and Beaverhead have been below average most of the season since October first.

JEFFERSON RIVER:

Only a few courses are measured near the Jefferson Basin on February first. Data from these few courses indicate the snow-pack on this Basin is half the average of 19 years of record for February.

MADISON RIVER:

The Madison River Basin has a little heavier blanket of snow than near-by basins. The average of seven courses surveyed is close to 60 per cent of last year or two-thirds of usual February first value.

GALLATIN RIVER.

Snow Surveys made on or about February first on this Basin indicate that the snow-pack this year is less than average amount. Although below average, snow water content in the Gallatin and Madison Basins are better off than other tributary basins of the Missouri drainage.

MISSOURI MAIN STEM.

The snow cover from Toston to Great Falls is extremely short this season. The usual water content on February first in this area is 5.0 inches. This season there is only two and a half inches. Tributary streams are likely to be short of water this year.

MARTAS RIVER:

At the Marias Pass Snow Course, the surveyors found six and a half inches of water in the snow. The normal amount is twelve inches. The usual gain from February to April is six inches. Even a normal fall for this two month period would leave us six inches short.

UPPER YELLOWSTONE RIVER:

Snow measurements made by Park Rangers indicate that there is a 50 per cent snow-pack over the Yellowstone Basin in the Park. Measurements to be made March first and April first may show a higher percentage than at the present time.

COLUMBIA RIVER DRAINAGE

FLATHEAD RIVER BASIN:

February first snow survey measurements are exceptionally small this year. Figures show we have only about two-fifths of last year's February first data. When compared with a long-time average, this year's data is 58 per cent of the usual occurrence. The Reservoirs at Hungry Horse and Flathead Lake are well filled. They are 77 and 67 per cent capacity. Smaller reservoirs are well filled for February first. They are above the usual level.

CLARK FORK RIVER:

The snow-pack on this Basin is about half the usual amount for February first. Several of the snow courses measured have a minimum of record and others are the smallest since 1944 and 1942. The shortage is becoming quite critical.

GENERAL STATEMENT

It is entirely possible that heavy precipitation during April, May, and June will be sufficient and timed properly to produce farm crops that mature early enough so that irrigation is not necessary. Those crops depending on supplemental irrigation are likely to be caught short.

Farm units that depend on filling small reservoirs with snow-fed streams should look carefully to their available supply. All indications are that the runoff season will be of short duration and not particularly large. The present supply on most watersheds is about half of what we had last season.



INDEX TO MONTANA & NORTHERN WYOMING SNOW COURSES

<u>Location</u>											<u>Location</u>										
Drainage Basin and Course Name	Montana Number	Elev.	Sec.	Lat.	Range	Long.	Record Began	Measuring Dates	Measured By	Drainage Basin and Course Name	Montana Number	Elev.	Sec.	Lat.	Range	Long.	Record Began	Measuring Dates	Measured By		
JEFFERSON RIVER (ROCK-SNAKEHEAD)																					
MISSOURI RIVER DRAINAGE																					
Lakeview Ridge	11E3	7400	27	11S	26	9E	1948	3,4,5	9	Blue Ridge	862	9500	23	31N	101W	1939	2,3,4,5	12			
Lakeview Canyon	11E4	6930	26	11S	24	9E	1948	3,4,5	9	Granier Meadow	864	9000	19	30N	100W	1936	2,3,4,5	12			
Lincklin	11E5	6950	5	11S	26	9E	1948	3,4	1	Larson Creek	996	9000	12	30N	103W	1948	3,4,5	12			
White Pine Ridge	12E1	8850	18	11S	26	9E	1948	3,4	1	Sawmill Glads	861	8500	3	31N	101W	1939	2,3,4,5	12			
(HORSE PRAIRIE)																					
Bloody Dick	13D10	7600	12	8S	16W	16W	1948	3,4	1	Blue Horn River	Wyoming										
Gold Stone	13D9	8100	11	8S	16W	16W	1948	3,4	1	Beaver Mill	992	8900	6	42N	102W	1948	2,3,4,5	12			
Leah Pass	13E1	7800	9	10S	15W	1948	3,4	1	Cow Creek	861	8700	36	31N	101W	1948	2,3,4,5	12				
Terrell Creek	13D12	6650	11	9S	15W	1948	3,4	1	Tensleep R.S.	787	8300	20	30N	106W	1935	4,5	1				
Trail Creek	13E2	7090	15	10S	15W	1948	3,4	1	Timber Creek	562	8800	29	17N	103W	1948	4,5	12				
Selway Junction	13C11	6800	27	8S	15W	1948	3,4	1	Ranger Creek	781	8800	32	53N	88W	1935	4,5	1				
(BIG ROLL)																					
Big Rose Pass	13D3	7600	28	3S	18W	1948	3,4	1	Wood River	971	8000	28	46N	103W	1939	2,3,4,5	12				
Big Hole Pass-Below	13D4	6930	24	3S	18W	1948	3,4	1	MISSOURI RIVER DRAINAGE CONT.												
East Boundary	13D5	6700	22	3S	17W	1948	3,4	1	(POPO ATIE RIVER)												
Gibbons Pass	13D2	7200	4	2S	19W	1934	1,2,3,4,5	1,2	Blue Ridge Meadow	864	9000	19	30N	100W	1936	2,3,4,5	12				
Jahns Creek	13D8	7340	25	7S	16W	1948	3,4	1	Laurel Creek	996	9000	12	30N	103W	1948	3,4,5	1				
Miner Forks	13D6	7300	24	6S	18W	1948	3,4	1	South Pass	863	9000	15	30N	101W	1939	2,3,4,5	12				
Miner Lake	13D7	6720	10	6S	16W	1945	3,4,5	1	(BIGHORN RIVER)												
(WISSE RIVER)																					
Anderson Mtn.	13D14	7000	18	3S	12W	1948	3,4	1	Beaver Mill	992	8900	6	42N	102W	1948	2,3,4,5	12				
Elk Horn	13D15	8450	15	4S	12W	1934	3,4,5	2	Cow Creek	861	8700	17	52N	109W	1948	1,2,3,4,5	5				
Wise River	13D13	6300	15	2S	12W	1948	3,4	1	Tensleep R.S.	787	8300	12	52N	110W	1936	1,2,3,4,5	5				
(RUBY RIVER)																					
Cottonwood	11E2	5200	21	10S	7W	1948	3,4	1	Big Goose	782	7700	4	55N	86W	1945	2,3,4,5	1				
Cottonwood (Upper)	13E1	8100	30	10S	7W	1948	3,4,5	1	Burgess Ranger Sta.	781	7900	36	56N	89W	1950	2,3,4,5	12				
Plainslight	13D3	6950	22	8S	7W	1948	3,4,5	1	Dose Lake	783	8800	11	55N	87W	1950	2,3,4,5	12				
Tobacco Root	13D2	6900	13	4S	7W	1948	3,4	1	Loganpole	961	8200	32	56N	106W	1940	4,5	1				
Vigilante	13D1	6125	28	9S	7W	1948	3,4	1	POWDER RIVER												
MADISON RIVER																					
Rebagon	11E5	6550	22	11S	3E	1934	1,2,3,4,5	2	North Powder	789	8500	5	47N	85W	1951	2,3,4,5	12				
West Yellowstone	11E7	6700	34	13S	5E	1934	1,2,3,4,5	2	Muddy Pass	788	8700	11	48N	85W	1950	2,3,4,5	1				
Rorris Basin	10E2	7500	44-42	11	10S	4E	1935	3,4	5,6	Soldier Park	785	8700	36	51N	85W	1950	2,3,4,5	12			
GALLATIN RIVER																					
Devil's Slide	10D4	8100	11	5S	6E	1948	2,3,4,5	2,6	West Powder	787	8500	1	25N	31W	1937	4,5,5	1				
Hood Meadow	10D3	6600	22	4S	6E	1948	2,3,4,5	2,6	Big Bird Basin	1441	6800	24	37N	26W	1937	4,5,5	1				
Mystic Lake	10D2	6600	30	3S	7E	1948	2,3,4,5	2,6	Red Mountain	1541	6000	4	36N	29W	1937	3,4,5	1				
New World	10D1	6700	24	3S	6E	1939	1,2,3,4,5	6,7	Wensel Divide	1447	5450	8	37N	24W	1955	4,5,5	1				
21-Mile	11P6	7150	1	11S	5E	1934	1,2,3,4,5	2	COLUMBIA RIVER BASIN												
MISSOURI RIVER MAIN STEM																					
Chasm Reservoir	12E5	6200	2	8N	5W	1936	1,2,3,4,5	2	KOOTENAI RIVER												
Crystal Lake	9C1	6100	19	12N	18E	1941	3,4	1	Barre Mountain	1581	6000	1	25N	31W	1937	4,5,5	1				
Grasshopper	10C2	7000	19	9N	19E	1938	3,4	1	Bluebird Basin	1441	6800	24	37N	26W	1937	4,5,5	1				
King's Hill	10C1	7950	35	12N	7E	1937	3,4,5	2	Catclaw Queen	1343	5700	7	35N	17W	1939	3,4,5	1				
Pionie Grounds	12C6	6500	10	5N	6E	1940	2,3,4	3	Deer Mountain	1421	5200	26	31N	19W	1937	1,2,3,4,5	1				
Pipesstone Pass	12D1	7200	11	11M	7W	1938	2,3,4,5	12	Elk Rocking Divide	1443	5770	35	32N	29W	1942	3,4,5	1				
Stampede Pass	12C1	6900	16	12M	7W	1941	3,4,5	2	Robrock	1381	5300	18	21N	13W	1951	1,2,3,4,5	1				
Ten Mile Cr., Lower	12C2	6250	13	8N	6W	1935	1,2,3,4,5	2	Kishenehan	1442	4300	7	37N	24W	1946	3,4,5	1				
Ten Mile Cr., Middle	12C3	6800	13	8N	6W	1934	1,2,3,4,5	2	Kishenehan #3	1446	4000	14	37N	24W	1946	3,4,5	1				
Ten Mile Cr., Upper	12C4	7000	19	8N	5W	1935	1,2,3,4,5	2	Logan Creek	1445	4300	30	30N	24W	1937	3,4,5	1				
(TETON RIVER)																					
Freight Creek	12A1	6000	13	26N	10W	1948	3,4	1,12	Spotted Creek	13A3	3800	11	26N	17W	1951	2,3,4,5	1				
Waldron Creek	12B2	5600	16	25R	9W	1948	3,4	1,12	Slide Rock Mountain	13C1	7200	26	10N	16W	1938	4,5	1,12				
West Fork	12B1	6000	6	25R	9W	1948	3,4	1,12	Southern Cross	13C5	6500	8	5N	15W	1939	2,3,4,5	3				
(SUN RIVER)																					
Benchmark	12B8	5500	9	20N	10W	1948	3,4	1	Stump Lake No. 2	13C7	7700	19	4N	13W	1934	2,3,4,5	1				
Cabin Creek	12B6	5400	33	23N	10W	1948	3,4	1	Stuart Mill	13C8	6400	31	14N	15W	1951	1,2,3,4,5	1,12				
S-Pull	12B9	5600	36	20N	10W	1948	3,4	1	Piney Grounds	12D1	6500	10	5N	16W	1940	2,3,4,5	3				
Gates Park	12B5	5300	31	24N	10W	1948	3,4	1	Pipesstone Pass	12D1	7200	11	1N	1N	1938	4,5	1,12				
Goat Mountain	12B7	7000	20	22N	10W	1948	3,4	2	Rez Perce Camp	12D2	7200	26	10N	16W	1937	4,5	1,12				
Wrong Ridge	12B3	6800	17	25N	10W	1949	3,4	1	Skalkaho Summit	13C3	7250	30	6N	17W	1937	3,4,5	1,12				
Wrong Creek	12B4	5700	32	25R	10W	1949	3,4	1	BITTERROOT RIVER												
(UPPER YELLOWSTONE)																					
Camp Senia	9D1	7890	2	8S	18E	1937	4,	1,12	East Fork Ranger Sta.	13D1	5400	16	2N	17W	1937	4	1,12				
Canyon	10E3	7750	44-44	11	10S	30-30	1938	1,2,3,4,5	12	Gibbons Pass	13D2	7100	4	2S	19W	1937	1,2,3,4,5	1			
Cooke City	10D7	7400	25	9S	14E	1937	1,2,3,4,5	5	Mad Creek	14C1	4500	24	11N	21W	1937	4					

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

Summary of snow survey data by tributary Watersheds February 1, 1955

	No. of Courses Averaged	No. Years Record	Snow water equivalent expressed as per cent of		
			1954%	1953%	AVERAGE %

MISSOURI RIVER BASIN IN MONTANA

<u>MADISON RIVER</u>	7	4-20	61	67	65
<u>GALLATIN RIVER</u>	4	2-17	64	74	64
<u>MISSOURI MAIN STEM</u>	6	10-20	50	51	55
Marias River	1	20	34	53	50
<u>UPPER YELLOWSTONE (MONTANA)</u> (WYOMING)	7	4-13	53	68	56
Shoshone River	2	6-8	39	48	36
Wind river	14	5-19	44	45	39
Popo Agie River	6	6-14	44	55	43
Owl Creek	2	6	42	59	51
Greybull River	1	2	20	40	27
Tongue River	2	4-5	57	87	72
Shell Creek	1	5	48	91	74
Clear Creek (Powder River)	1	4	93	81	57

COLUMBIA RIVER BASIN IN MONTANA

<u>KOOTENAI RIVER ABOVE LIBBY, MONT.</u>	7	4-16	52	64	67
<u>FLATHEAD RIVER</u>	6	3-20	40	68	58
<u>UPPER CLARK FORK</u>	12	2-20	44	56	58
<u>BITTERROOT RIVER</u>	1	15	40	40	50

STATUS OF RESERVOIR STORAGE FEBRUARY 1, 1955

BASIN & STREAM	RESERVOIR	USEARLE CAPACITY (M.A.F.)	THOUSAND ACRE FEET IN STORAGE				10-yr avg 1943-52
			1955	1954	1953	1952	

MISSOURI RIVER BASIN

Beaverhead	Lima	84.00	11.8	18.6	30.9	35.6	39.3
Madison Riv	Hebgen Lk	345.00	167.5	155.1	179.3	264.0	235.3
Madison Riv	Ennis Lk	41.00	38.2	38.5	34.4	35.1	35.7
Hyalite Crk	Middle Creek	8.03	--	2.7	--	--	--
Missouri Riv	Canyon Ferry	2,043.00	1,311.0	421.0	--	--	--
Missouri Riv	Hauser & Helena	62.50	55.1	62.5	57.3	46.3	41.5
Missouri Riv	Lk Helena	10.45	7.9	10.4	8.6	5.2	1/ 11.8
Missouri Riv	Holter Lk	81.92	62.2	74.9	58.7	49.8	55.7
N.Fk.Sun Riv	Gibson	105.00	64.0	76.7	53.1	66.4	64.3
N.Fk.Sun Riv	Willow Crk	32.30	24.1	26.4	20.1	24.0	16.7
N.Fk.Sun Riv	Pishkun	32.00	19.6	20.6	17.7	23.3	19.0
Birch Crk	Swift	30.00	--	22.6	11.2	23.1	21.9
Dupuyer & Birch	Lk Francis	112.00	--	92.2	95.5	93.6	88.2
Judith Riv	Ackley Lk	5.82	--	2.4	2.5	3.8	4.5
Missouri Riv	Ft. Peck	19,000.00	9,314.0	12,180.	12,570.	11,690.	11,418.
Milk Riv	Fresno	127.20	77.2	79.0	76.8	90.3	56.0
Milk Riv	Nelson	66.80	50.6	38.1	30.3	38.5	30.6
W.Rosebud Crk	Mystic Lk	20.80	7.9	10.1	6.8	8.2	9.5
Red Lodge Crk	Cooney	27.50	--	--	--	--	9.2
Tongue Riv	Tongue Riv	73.90	7.0	7.1	14.5	18.3	9.4
Swiftcurrent Crk	Shérburne Lk	66.10	--	17.2	18.4	21.9	--

MISSOURI RIVER BASIN - WYOMING

Shoshone Riv	Buffalo Bill	440.00		156.7	158.4	266.4	302.5
Wind Riv	Boysen	758.00		337.7	580.2	92.4	3/ 92.4
Wind Riv	Pilot Butte	31.6		8.9	9.0	6.5	12.5
Bull Creek	Bull Lk	152.00		84.9	66.9	74.7	69.5
Belle Fourche	Key Hole	190.00		8.6	8.2	--	--

MISSOURI RIVER BASIN - NORTH DAKOTA

Hart River	Hart Butte	54.80		54.3	53.8	59.9	4/ 58.1
Hart River	Dickerson	4.3		5.7	3.0	5.7	3/ 4.4

MISSOURI RIVER BASIN - SOUTH DAKOTA

Belle Fourche	Belle Fourche	185.00		97.1	43.5	72.0	106.3
Cheyenne River	Angostura	160.00		30.0	43.2	52.0	52.0
Cheyenne River	Deerfield	15.1		14.5	13.1	14.6	12.8
Grand River	Shadehill	84.00		80.5	76.2	--	--

1/ 7 yr average

3/ 3 yr average

4/ 4 yr average

STORAGE II

STATUS OF RESERVOIR STORAGE FEBRUARY 1, 1955

BASIN & STREAM	RESERVOIR	USEABLE CAPACITY (M.A.F.)	THOUSAND ACRE FEET IN STORAGE					10-yr avg. 1943-52
			1955	1954	1953	1952		

COLUMBIA RIVER BASIN

Flint Crk	Georgetown Lk	31.00	24.4	21.1	22.9	23.4	23.9
S.Fk.Flathead	Hungry Horse	3,500.00	2,701.0	2,021.0	655.5	65.8	3/ 914.1
Flathead Riv	Flathead Lk	1,791.00	1,109.0	836.5	828.1	730.1	736.2
Flathead	Camas Res.'s	42.80	38.10	30.8	33.5	40.2	6/ 20.1
Flathead	Mission Valley	98.60	54.6	19.0	33.6	34.6	7/ 32.1
Jocko Crk	Lwr Jock Lk	7.6	--	--	--	--	--

3/ 3 yr average

6/ Camas Reservoirs are shown as a sum of (4) small reservoirs on the west side of Flathead Lake located on Dry Creek and Little Bitterroot River.

7/ Mission Valley Reservoirs are shown as a sum of (8) small reservoirs located south and east of Flathead Lake. Both Camas and Mission Valley reservoirs are operated by the Indian Irrigation Service.

MONTANA SNOW SURVEYS - FEBRUARY 1, 1955

MISSOURI BASIN DRAINAGE BASIN AND SNOW COURSE	No.	Elev.	Date of Survey	SNOW COVER MEASUREMENTS				Y e a r s R e c o r d				
				1955 Snow Depth (In.)	Water Content (In.)	1954	1953					
<u>JEFFERSON RIVER</u>												
(Rock-Beaverhead)												
Lakeview Ridge	11E3	7400				--	6.6	6.6				
Lakeview Canyon	11E4	6930					9.5	8.6				
*Camp Creek (Big Hole)	12E3	6800	1/30	20	3.9	6.3	9.6	6.6				
Gibbons Pass	13D2	7100	1/28	31	7.6	19.0	18.6	15.2				
*Moose Creek	13D16	6200				13.1	15.6	11.0				
<u>MADISON RIVER</u>												
Hebgen	11E5	6550	2/2	32	5.9	8.6	7.3	8.3				
W. Yellowstone	11E7	6700	2/2	23	5.3	8.3	6.8	7.8				
21-Mile	11E6	7150	2/1	34	7.6	13.5	11.2	12.4				
*Big Springs	11E9	6500	1/28	39	9.1	14.1	14.5	13.0				
*Island Park	11E10	3600	1/30	34	7.8	12.4	11.1	10.2				
*Valley View	11E8	6500	1/29	32	5.7	8.2	9.7	9.9				
Norris Basin	10E2	7500	2/1	23	4.5	8.9	6.3	8.0				
<u>GALLATIN RIVER</u>												
Devil's Slide	10D4	8100	2/5	42	8.9	12.3	10.3	11.3				
Hood Meadow	10D3	6600	2/5	22	2.6	4.8	3.5	4.2				
New World	10D1	6700	1/23	24	3.6	5.1	5.7	7.2				
21-Mile	11E6	7150	2/1	34	7.6	13.5	11.2	12.4				
<u>MISSOURI RIVER MAIN STEM</u>												
Chessman Res.	12C5	6200	1/31	7	1.3	3.6	3.0	3.2				
Picnic Grounds	13C6	6500	2/1	8	1.6	5.1	3.8	3.5				
Pipestone Pass	12D1	7200	1/27	10	1.6	2.1	3.0	2.9				
Tenmile, Lower	12C2	6250	2/1	14	2.5	5.3	4.9	4.7				
Tenmile, Middle	12C3	6800	2/1	19	3.6	7.2	7.6	6.6				
Tenmile, Upper (Marias River)	12C4	8000	2/1	23	5.4	8.6	9.0	8.3				
Marias Pass	13A5	5250	2/1	24	6.5	19.7	12.2	12.0				
<u>UPPER YELLOWSTONE</u>												
Canyon	10E3	7750	1/30	34	7.8	11.5	8.9	10.4				
Cooke City	10D7	7400	2/2	20	3.4	8.2	5.7	6.1				
Lake Camp	10E4	7850	2/1	21	3.2	7.4	5.7	7.5				
Lupine	10F1	7300	1/31	27	6.1	7.8	5.3	6.5				
*Lewis Lake Div.	10E9	7000	1/30	53	16.6	31.9	31.2	32.9				
*Astor Creek	10E8	7700	1/30	40	10.7	23.4	24.5	25.5				
*Tom Thumb Summit	10E7	7900	1/30	35	8.2	17.3	14.8	17.6				

MONTANA SNOW SURVEYS - FEBRUARY 1, 1955

MISSOURI BASIN DRAINAGE BASIN AND SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS							Y R E C O R D	
			Date of Survey	1955 Snow Depth (In.)	Water Content (In.)	Past Record			Water Content (In.)		
						1954	1953	Average			
<u>LOWER YELLOWSTONE (Wind River above Diversion Dam)</u>											
Brooks Lake #3	10F8	9200	1/24	41	9.7	15.3	15.6	16.9	14		
Burroughs Creek	9F4	8800	1/26	19	4.4	11.0	11.5	12.5	6		
Du Noir	9F6	8750	1/25	10	2.0	5.5	5.2	6.5	13		
Geyser Creek	9F7	8500	1/25	10	1.4	5.5	4.9	6.3	6		
Little Warm	9F8	9500	1/25	25	5.0	11.1	10.3	14.4	5		
Sheridan	9F5	7500	1/24	14	2.2	5.1	6.5	5.7	13		
T-Cross Ranch	9F3	8000	1/26	11	2.2	6.2	6.3	5.2	14		
*Togwotee Pass	10F9	9600	1/31	47	11.6	21.1	18.7	19.9	19		
Dinwoodie	9F10	10000	1/22	15	2.8	6.5	7.1	9.7	6		
Dry Creek	9F9	9500	1/22	8	1.7	3.5	3.7	5.0	6		
Hobbs Park	9G3	10000	1/30	19	4.5	12.3	8.9	13.5	6		
Mosquito Park	9G4	9500	1/30	11	2.0	5.3	4.8	6.4	11		
St. Lawrence	9F11	9000	1/31	6	1.3	3.7	4.1	4.9	11		
Trout Creek	9G2	8400	1/30	6	0.8	4.2	3.6	3.8	6		
*Black Rock	10F7	8600				15.7	14.2	14.3	19		
*Yellow Jacket	10F10	6775				0	4.6	3.5	10		
<u>POPO AGIE RIVER</u>											
Blue Ridge	8G2	9500	2/1	14	3.9	8.8	6.4	8.1	14		
Grannier Meadows	8G4	9000	2/1	24	4.5	9.7	8.2	9.6	13		
Sawmill Glade	8G1	8500	2/1	11	2.2	4.7	4.2	5.0	13		
South Pass	8G3	9000	2/1	22	5.5	10.6	8.8	9.4	13		

*Adjacent Basin

MONTANA SNOW SURVEYS - FEBRUARY 1, 1955

MISSOURI BASIN DRAINAGE BASIN AND SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS							Year Record	
			1955			Past Record					
			Date of Survey	Snow Depth (In.)	Water Content (In.)	Water Content (in.)	1954	1953	Average		
<u>BIG HORN RIVER - WYOMING</u>											
Beavers Mill	9F2	8900				6.4	5.3	5.5	6		
Owl Creek	8F1	8700				5.4	3.2	4.3	6		
Timber Creek	9E2	8800	2/1	5	0.9	--	--	3.7	3		
Wood River	9E1	8000	1/31	6	1.0	4.9	2.5	3.7	2		
<u>SHOSHONE RIVER</u>											
East Entrance	10E6	7000	2/2	21	2.9	8.3	6.7	9.1	6		
Sylvan Pass	10E5	7100	2/2	26	4.1	9.5	7.8	10.1	8		
<u>TONGUE RIVER</u>											
Burgess Jct.	7E1	7900	1/28	24	4.7	13.4	8.1	12.2	4		
Big Goose	7E2	7700	1/29	11	1.6	1.9	2.0	2.3	4		
Dome Lake	7E3	9000	1/28	19	3.1	6.4	3.4	4.2	5		
<u>POWDER RIVER</u>											
North Powder	7E9	8500	1/29	26	5.4	4.4	3.8	5.0	4		
Soldier Park	7E5	8700	1/29	7	1.3	1.4	1.6	2.3	4		
Muddy Pass	7E8	9700				--	--	4.8	1		
<u>CHEYENNE RIVER - SOUTH DAKOTA</u>											
Upper Spearfish	1SD	6500				4.0	4.9	4.5	11		

MONTANA SNOW SURVEYS - FEBRUARY 1, 1955

COLUMBIA BASIN DRAINAGE BASIN AND SNOW COURSE	No.	Elev.	Date of Survey	SNOW COVER MEASUREMENTS				Y R E C O R D	
				1955 Snow Depth (In.)	Water Content (In.)	Past Record			
						Water Content (In.)	1954	1953	Average

KOOTENAI RIVER (above Libby,
Montana)

Fernie	Can	3500	1/31	20	6.1	10.7	7.8	6.6	15
New Fernie	Can	4100	1/31	28	8.5	14.3	11.9	12.2	4
Marble Canyon	Can	5000	1/31	34	7.1	12.8	13.3	11.9	7
Nelson Creek	Can	3050	1/31	27	7.7	15.2	13.3	10.4	16
Sinclair Pass	Can	4500	1/31	13	2.7	8.0	3.8	4.8	7
Sullivan Mine	Can	5100	2/1	21	5.2	11.5	10.3	10.2	9
Gray Creek	Can	5100	1/30	38	9.5	18.2	12.4	13.6	6

FLATHEAD RIVER

Basin Creek	13B14	5000	1/29	14	3.1	12.8	6.4	9.0	4
Coyote Hill	13B10	4200	2/1	20	4.6	10.1	8.2	7.3	8
Desert Mountain	13A2	5600	2/2	27	5.8	14.8	9.2	11.1	8
Holbrook	13B13	4530	1/29	22	5.8	12.0	7.2	8.4	4
Marias Pass	13A5	5250	2/1	24	6.5	19.7	12.2	12.0	20
Quintonkon	13A13	3800	1/29	34	8.4	18.0	8.3	12.1	3
Trout Lake	13A12	3600	1/27	37	8.1	--	--	--	1
Twin Creeks	13B11	3580	1/27	26	5.9	12.6	8.4	10.2	4

UPPER CLARK FORK

Coyote Hill	13B10	4200	2/1	20	4.6	10.1	8.2	7.3	8
Chessman Res	12C5	6200	1/31	7	1.3	3.6	3.0	3.2	19
Intergaard	13C4	6450	2/1	15	2.8	5.9	5.6	5.2	10
Lubrecht Forest #6	13C8	5400	2/1	10	1.7	4.5	2.1	3.8	3
Picnic Grounds	12C6	6500	2/1	8	1.6	5.1	3.8	3.5	10
Pipestone Pass	12D1	7200	1/27	10	1.6	2.1	3.0	2.9	15
Southern Cross	13C5	6500	2/1	12	2.4	6.2	5.1	4.1	10
Storm Lake #2	13C7	7780	1/28	24	6.2	8.2	7.8	8.0	2
Stuart Mill	13C6	6500	2/1	14	2.2	5.4	4.6	4.5	10
Tenmile, Lower	12C2	6250	2/1	14	2.5	5.3	4.9	4.7	19
Tenmile, Middle	12C3	6800	2/1	19	3.6	7.2	7.6	6.6	20
Tenmile, Upper	12C4	8000	2/1	23	5.4	8.6	9.0	8.3	20
Lookout	15B2	5250	2/1	50	14.7	38.4	22.4	23.0	18

BITTERROOT

Gibbons Pass	13D2	7100	1/28	31	7.6	19.0	18.6	15.2	15
*Moose Creek	13D16	6200				13.1	15.6	11.0	9

*Adjacent Basin



Federal - State - Private
COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"WATER IS THE WEST'S GREATEST RESOURCE"